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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,353	11/19/2001	Xiaodong C. Xu	MTC6788 (39-21 (52589))	8762
321	7590	02/16/2005	EXAMINER	
SENNIGER POWERS LEAVITT AND ROEDEL			CLARDY, S	
ONE METROPOLITAN SQUARE			ART UNIT	
16TH FLOOR			PAPER NUMBER	
ST LOUIS, MO 63102			1616	

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

09/988,353

Applicant(s)

XU ET AL.

Examiner

S. Mark Clardy

Art Unit

1616

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 09 December 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) a set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The reply was filed after the date of filing a Notice of Appeal, but prior to the date of filing an appeal brief. The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

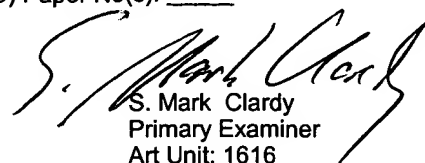
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: 67,68,86,89-92,97,98,112,121 and 122.  
Claim(s) objected to: 15.  
Claim(s) rejected: 3-14,16-32,70,71,73-76,78,79,87,94,95,101-111,113-120,123,128-130,140-142 and 146-148.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☒ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_.

  
S. Mark Clardy  
Primary Examiner  
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Continuation of 5. Applicant's reply has overcome the following rejection(s): obviousness of claims 15, 67, 68, 86, 89-92, 97, 98, 112, 121 122.

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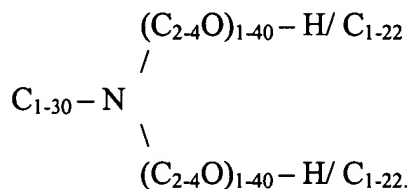
Claims 3-32, 67, 68, 70, 71, 73-76, 78, 79, 86, 87, 89-92, 94, 95, 97, 98, 101-123, 128-130, 140-142, and 146-148 are pending in this application which is a continuation in part of SN 09/926,521, which was filed under 35 USC 371 as the national stage application of PCT/US01/16550, filed May 21, 2001, which claims the benefit under 35 USC 119(e) of US Provisional Applications No. 60/206,628 (May 24, 2000), 60/205,524 (May 19, 2000), 60/273,234 (March 2, 2001), and 60/274,368 (March 8, 2001). The following continuation applications have also been filed: 09/988,340; 09/988,352.

Applicants elected the invention/species comprising:

Glyphosate (acid, salt, or ester)

Oxalic acid (as the dicarboxylic acid)<sup>1</sup>

Dialkoxylated Amine Surfactant (formula 36, page 23):



The weight ratio of surfactant to oxalic acid enhancing compound (sf:ox) component is 5:1 to about 40:1 (claim 3).

Oxalic acid is specifically recited as the enhancer compound in claims 3-8, 10-14, 16-20, 22-27, 29-32, 101-106, 108-111, 128, 129, 140, and 141.

The enhancer compound is generically claimed in claims 9, 15, 21, 28, 67, 68, 70, 71, 73-76, 78, 79, 86, 87, 89-92, 94, 95, 97, 98, 107, 112-123, 130, 142, 146-148.

<sup>1</sup>Claims 67, 68, 70, 71, 73-76, 78, 79, 84-87, 89-92, 94, 95, 97, 98, 113-123, 146-148

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Applicants' invention lies in the discovery that the enhancer compound (e.g., oxalic acid) enhances plant cell membrane permeability, thus enhancing the transport of glyphosate through the phloem resulting in increased phytotoxicity. The mechanism is described as being independent of any metal ion chelating effect.

Applicants have now grouped the independent claims in the following groups for discussion. Independent claims 75 and 89 were not included with any of the groups. Claim 75 appears to be part of Group D; and claim 89 appears to be part of Group E:

- |    |                    |  |
|----|--------------------|--|
| A. | 3, 101, 113, 123   | sf:ox ratio of 5:1 – 40:1                                    |
| B. | 12, 67, 109        | concentrate compositions, 455 g ae/L                         |
| C. | 17, 94             | non-IPA glyphosate salt compositions                         |
| D. | 26, 70 [75]        | potassium and diammonium glyphosate compositions             |
| E. | 86 [89]            | >360 g ae/L, with activity > EDTA or citrate compositions    |
| F. | 97                 | glyphosate:oxalic acid ratio > 21:1                          |
| G. | 116, 118           | method of decreasing surfactant loading, or aquatic toxicity |
| H. | 121                | method of controlling morningglory with glyph. + oxalic      |
| I. | 128, 140, 146, 148 | solid compositions.  |

See the Final Rejection for the text of the obviousness rejection.

**Group A.** Applicants have argued that the claimed sf:ox range (5:1 to 40:1) produces unexpected results in view of Hasebe (which discloses a range for the same glyphosate and oxalic acid components that encompasses the range claimed herein), and summarizes pertinent data for compositions within and outside the claimed 5 – 40:1 range. However, given the fact that Hasebe teaches the same components in a wider range, it would appear that a direct

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comparison with Hasebe would be necessary to establish unexpected results. The summarized data in the table does not appear to provide evidence of any distinction with those compositions outside the claimed range. Of those that appear to compare % control for compositions inside and outside the claimed range, the difference in % control activity is within 5%. The same degree of difference appears to occur in the comparisons between compositions that are both within the claimed sf:ox range.

**Group B.** In view of Wright et al, which discloses concentrated glyphosate compositions (up to 500 g ae/L, col 5:22+), it would appear that the non-oxalic acid compositions would remain obvious over the cited prior art. In view of the disclosure of Turner concerning precipitation of glyphosate from concentrated spray solutions containing dicarboxylic acids, the subject matter of claim 15, as well as claims 67, 68, and 112, would appear to be allowable.

**Group C.** Beestman teaches the equivalence of various forms of glyphosate in column 10; absent evidence of unexpected results, it would remain obvious to substitute non-IPA salts for the exemplified IPA salts of the prior art.

**Group D.** As for Group C, above, Beestman teaches the equivalence of various forms of glyphosate, including alkali metal salts, in column 10.

**Group E.** As for Group B, above, Wright et al discloses concentrated glyphosate compositions; however, Turner teaches that glyphosate precipitates from concentrated spray solutions containing dicarboxylic acids. Inasmuch as claims 86 and 89-92 all require the presence of oxalic acid in concentrated glyphosate compositions, these claims would appear to be allowable over the prior art. (See also the discussion for Group B, above.)

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**Group F.** In response to applicants' comments and data comparing results for various glyphosate:ox ratios, claims **97 and 98** are allowable.

**Group G.** As for Group A, it would appear that a direct comparison with the methods of making the compositions of Hasebe would be necessary, inasmuch as the method steps in claims 116 and 118 are simply the addition of oxalic acid to glyphosate compositions, as disclosed in Hasebe.

**Group H.** In view of the data discussed with respect to control of morningglory, claims **121 and 122** are allowable over the cited prior art.

**Group I.** Wright teaches solid compositions comprising glyphosate and oxalic acid and other enhancer compounds (col 5:40+; col 8:26+); thus, it would appear that a direct comparison with the granular compositions disclosed in columns 13-14 of Wright would be necessary to overcome the obviousness rejection of the solid compositions of claims 128, 140, 146, and 148.

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 67, 68, 86, 89-92, 97, 98, 112, 121, and 122, are allowable over the prior art.

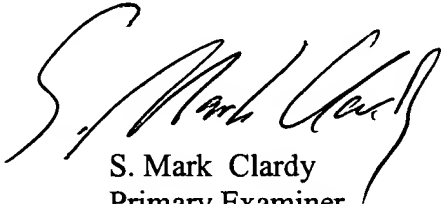
Claims 3-14, 16-32, 70, 71, 73-76, 78, 79, 87, 94, 95, 101-111, 113-120, 123, 128-130, 140-142, and 146-148 remain rejected for reasons of record, as discussed above in this Advisory Action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is 571-272-0611. The examiner can normally be reached on 7:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on 571-272-0887. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Mark Clardy  
Primary Examiner  
Art Unit 1616

February 14, 2005